We claim:

1. A waste treatment system, comprising:

an anoxic pretreatment tank adapted to receive raw untreated sewage having a mixture of solids and liquids, wherein said sewage within said anoxic tank separates into a sludge layer, a scum layer, and a liquid effluent layer between said sludge layer and said scum layer, wherein said anoxic tank is adapted to provide some effluent denitrification;

a granular fixed film denitrification reactor connected to said anoxic tank, said denitrification reactor being adapted to denitrify a liquid effluent and provide some biochemical oxygen demand (BOD) removal from said effluent; and

a membrane bioreactor connected to said denitrification reactor, said membrane bioreactor adapted to provide ultra and micro filtration of a denitrified effluent, retain biomass for BOD removal and nitrification;

wherein said anoxic tank effluent is passed from the anoxic tank to the denitrification reactor for

denitrification, wherein a denitrified effluent is passed from the denitrification reactor to the membrane bioreactor for filtration.

2. A waste treatment system as recited in claim 1, wherein:

said anoxic tank has a top, a bottom, a receiving side, a discharge side, a front and a rear, said top, bottom, sides, front and rear, defining a tank interior, said tank interior receiving said sewage through a receiving waste pipe protruding through the tank receiving side, wherein said effluent is discharged from said tank interior through a discharge pipe protruding through the tank discharge side.

3. A waste treatment system as recited in claim 2, wherein:

said denitrification reactor has a top, a bottom, a receiving side, a discharge side, a front and a rear, said top, bottom, sides, front and rear defining a reactor interior, said reactor interior having a filter and a sump beneath said filter adjacent the interior bottom, said reactor interior receiving said anoxic effluent from said anoxic

tank from the anoxic discharge pipe into a connecting reactor effluent input pipe protruding through the reactor receiving side, said effluent input pipe opening into the reactor interior above the reactor filter, said anoxic effluent flowing through the filter and collecting in the reactor sump, said filtered effluent being substantially denitrified, said denitrified effluent flowing by gravity out of the sump through a discharge pipe into the membrane bioreactor.

4. A waste treatment system as recited in claim 3, wherein:

said membrane bioreactor has a top, a bottom, a receiving side, a discharge side, a front and a rear, said top, bottom, sides, front and rear defining a bioreactor interior, said bioreactor interior receiving said denitrified effluent from the reactor discharge pipe through a bioreactor pipe protruding through said bioreactor receiving side, said bioreactor interior having a sump pump adapted to return a nitrified content of the denitrified effluent from the reactor sump through the bioreactor pipe into a reactor return pipe and into the denitrification reactor, said bioreactor

interior containing a membrane pack adapted to draw in the denitrified effluent pooled within the bioreactor interior, said membrane pack adapted to micro filter the denitrified effluent and discharge the filtered effluent into a filtered effluent pump basin, said pump basin containing a sump pump adapted to pump out the micro filtered effluent through a bioreactor discharge pipe.

5. A waste treatment system as recited in claim 4, wherein:

a biomass content from the denitrified effluent passed from the denitrification reactor to the membrane bioreactor settles to the membrane bioreactor bottom and is adapted to provide nitrification and further reduce BOD in the denitrified effluent.

6. A waste treatment system as recited in claim 5, further comprising:

a backwash process air pipe brought externally through the reactor discharge wall near the reactor top into the reactor interior, said air pipe being brought down through the filter to a junction between the filter and the sump wherein the air

pipe discharges air, said air rising through the filter and venting out through a vent pipe through one of the reactor walls near to the reactor top, said air adapted to pushing biomass and effluent back into the anoxic tank.

7. A waste treatment system as recited in claim 6, further comprising:

a branch from the reactor air pipe extending into the bioreactor interior and connected to the membrane pack for a source of pressurized air, said pressurized air adapted for clearing and cleaning the membrane pack and secondly for nitrification processing within the bioreactor;

a valve in the air pipe adapted to direct air either into the dentrification reactor via the air pipe or into the membrane pack.

8. A waste treatment system as recited in claim 7, wherein:

said reactor filter has two layers, an upper sand layer and an adjacent, lower gravel layer.

9. A waste treatment system as recited in claim 8, further comprising:

a recycle pipe connecting the denitrification reactor with the anoxic tank wherein a portion of the nitrified effluent is returned and recycled back to the denitrification reactor and a portion returned and recycled back into the anoxic tank.

10. A waste treatment system as recited in claim 9, wherein:

said bioreactor pump basin is external to the bioreactor.

11. A waste treatment process comprising the steps:

bringing raw waste untreated sewage having a mixture of solids and liquids into an anoxic tank;

separating said untreated sewage into a sludge layer, a scum layer, and a liquid effluent layer between said sludge layer and said scum layer;

passing said liquid effluent into a denitrification reactor;

filtering and denitrifying said liquid effluent to form a denitrified effluent;

gathering said denitrified effluent into a sump;

discharging said denitrified effluent into a membrane bioreactor;

pooling said denitrified effluent within said bioreactor;

nitrifying said denitrified effluent;

drawing said nitrified effluent through a membrane pack and micro filtering said nitrified effluent to form a micro filtered effluent; and

discharging said micro filtered effluent into a pump basin.

12. A waste treatment process as recited in claim 11, further comprising the step:

returning a portion of the nitrified effluent within said bioreactor back to the dentrification reactor.

13. A waste treatment process as recited in claim 12, further comprising the step:

bringing pressurized air into said reactor and through said filtering liquid effluent.

14. A waste treatment process as recited in claim 13, further comprising the step:

bringing pressurized air through said membrane pack.

15. A waste treatment process as recited in claim 14, further comprising the step:

returning and recycling a portion of the nitrified effluent back into the denitrification reactor.

16. A waste treatment process as recited in claim 15, further comprising the step:

returning and recycling a portion of the nitrified effluent back into the anoxic tank.